



A.D. 1855 N° 796.

S P E C I F I C A T I O N

OF

JOHN ALDERMAN.

ADJUSTABLE COUCHES, &c. FOR INVALIDS.

L O N D O N :

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A.D. 1855 N° 796.

Adjustable Couches, &c. for Invalids.

LETTERS PATENT to John Alderman, of Denmark Street, in the County of Middlesex, Manufacturer, for the Invention of “**IMPROVEMENTS IN THE CONSTRUCTION OF ADJUSTABLE COUCHES, CHAIRS, AND OTHER SIMILAR DESCRIPTIONS OF FURNITURE FOR INVALIDS.**”

Sealed the 5th October 1855, and dated the 11th April 1855.

PROVISIONAL SPECIFICATION left by the said John Alderman at the Office of the Commissioners of Patents, with his Petition, on the 11th April 1855.

I, JOHN ALDERMAN, of Denmark Street, in the County of Middlesex, Manufacturer, do hereby declare the nature of the said Invention for “**IMPROVEMENTS IN THE CONSTRUCTION OF ADJUSTABLE COUCHES, CHAIRS, & OTHER SIMILAR DESCRIPTIONS OF FURNITURE FOR INVALIDS,**” to be as follows (that is to say) :—

My said improvements, which have for their object the adjustment of the said couches, chairs, and other similar articles of furniture to the commodious reception of invalids in the various postures in which it may be desirable for them alternately or permanently to repose, or to be placed with a view to surgical operations, consist in adapting to the upper portions of such articles of furniture a frame divided into two or more portions, connected by joints or hinges, and worked by means of screws or nuts, in such manner that either of the said

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portions may be gradually elevated or depressed, as it is desired to raise or lower the head, feet, or knees of the invalid, or any parts of the body which are to be operated on. I claim the general construction of a divided frame, of which the parts are connected by joints and hinges, and worked through the medium of nuts and screws, in the manner and for the purposes herein- 5 before set forth and described.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said John Alderman in the Great Seal Patent Office on the 11th October 1855.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOHN 10 ALDERMAN, of Denmark Street, in the County of Middlesex, Manufacturer, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Eleventh day of April, in the year of our Lord One thousand eight hundred and fifty-five, in the eighteenth year of Her reign, 15 did, for Herself, Her heirs and successors, give and grant unto me, the said John Alderman, Her special licence that I, the said John Alderman, my executors, administrators, and assigns, or such others as I, the said John Alderman, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the 20 term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "**IMPROVEMENTS IN THE CONSTRUCTION OF ADJUSTABLE COUCHES, CHAIRS, AND OTHER SIMILAR DESCRIPTIONS OF FURNITURE FOR INVALIDS,**" upon the condition (amongst others) that I, the said John 25 Alderman, by an instrument in writing under my hand and seal, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said John Alderman, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement, and the Drawings therein referred to (that is to say):—

My said improvements, which have for their object the adjustment of the 35

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said couches, chairs, and other similar articles of furniture to the commodious reception of invalids in the various postures in which it may be desirable for them alternately or permanently to repose, or to be placed with a view to surgical operations, consist in attaching to the lower frame of such articles of
5 furniture a rising frame, divided into two or more portions, connected by joints or hinges, and worked by means of screws and nuts, in such manner that either of the said portions may be gradually elevated or depressed, as it is desired to raise or lower the head, feet, or knees of the invalid, or any parts of the body which are to be operated on.

10 But in order that these my said improvements may be more fully understood and readily carried into effect, I will now proceed to describe them by the aid of the accompanying Drawings, reference being had to the letters and figures thereon marked (that is to say):—

Fig. 1, Sheet 1, represents a sectional side elevation of an improved invalid
15 couch; Fig. 2, an end elevation, with the foot end elevated, for the purpose of showing the diagonal motion links and levers, for elevating and depressing the different parts of the couch; Fig. 3, a plan view of the top or rising frame of the couch, with the mattress removed; Fig. 4, an underneath view thereof, with a slight modification of the tightening stays or straps, for the insertion
20 of a pan for the convenience of the patient; Fig. 5, a sectional side elevation of a couch, showing a modification of the several parts for giving motion to the upper frame; Fig. 6, a detached view of one of the arms of the said couch, showing the joints and centres upon which it works in connection with the rising frame; and Fig. 7, an end elevation of a bedstead for suspending the
25 mattress, bed, or sheet, so that the patient or invalid may be raised or lowered to enable the bed to be made, or the patient to be placed in any posture for surgical examination or operation.

Figs. 8, 9, and 10, Sheet 2, represent different positions in which the couch may be adjusted for the comfort or ease of the invalid or for surgical purposes;
30 Fig. 11, a side view of a couch, partly in perspective, showing a nut and screw movement for giving a backward and forward motion to the rising frame; Fig. 12, an adjustable chair, furnished with the diagonal link and lever motion, as employed in the couch; and Fig. 13, an easy chair, furnished with folding side lever handles, for the purpose of carrying a person up and down stairs, as
35 represented detached at Fig. 14. In each Figure the same letters of reference denote similar corresponding parts. *a, a*, frame of couch; *b, b*, rising frame; *c, c*, bands or straps upon which the mattress is placed; *d, d*, longitudinal straps; *e, e*, buckles for tightening or slackening the said straps as required; *f, f*, elastic band of india-rubber or otherwise, to which the ends of the said

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straps or bands are attached ; *g, g*, laths ; *h, h*, raising joints ; *i, i*, opening for the reception of a pan ; *j, j*, right and left handed screws ; *k, k*, traversing nuts ; *l, l*, fixed central bearing for steadying the screw ; *m, m*, bearings in which the said screw revolves ; *n, n*, diagonal motion links ; *o, o*, transverse rods, to which the diagonal motion links are attached by the joints *p, p* ; *q, q*, 5 radial bars or levers, one on each side of the couch, for the purpose of moving the whole of the rising frame by one action in the direction of the dotted line *r* ; *s, s*, revolving levers ; *t, t*, friction rollers fitted thereto, which work on inclined planes or metal surface bearings *u, u*, as the case may require, for the purpose of actuating any particular part ; *v, v*, winch handle for giving motion to the 10 screw ; *w, w*, mattress ; *x*, wedge-shaped pillow, stuffed with feathers and divided into three separate compartments, as indicated by the dotted lines, so as to prevent them from accumulating and hardening the pillow ; *y*, arm of couch ; *z*, centres upon which the same works. A, reading desk ; B, stem or rod by which the reading desk is attached to the rising frame, so as to move 15 with it, and retain at all times a convenient position for the reader ; C, C, foot end of couch ; D, D, head posts of a bedstead ; E, E, sliding rail ; F, F, frame for the reception of the bed or mattress ; G, G, inclined planes, upon which the frame of the bed may be tilted on either side, as required, through the medium of the friction rollers H, H ; I, I, pulley blocks ; I¹, I¹, pulley 20 blocks, attached to the traversing nuts ; J, J, staple fastenings, to which the wire cord or otherwise is attached ; K, K, traversing nuts ; L, L, wire rope or cord, for actuating or giving motion to the bed ; M, nut and screw movement, for giving a backward and forward motion to the rising frame ; N, N, spring hooks, for attaching the folding side lever handles to the chair ; O, strap 25 for securing the handle to the chair in a vertical position.

In conclusion to my foregoing description I would here briefly remark, that in order to place an invalid in any posture that may be desired by elevating or depressing any particular portion of the couch, a common lever or winch handle is placed upon the shank end of the screw in connection with such part, which, 30 upon being turned, gives motion to the same by causing the traversing nuts (through the intervention of the right and left handed screw) to be separated or brought together, thereby elongating or contracting the distance between the joints, so as to raise or depress the part in connection therewith ; the said winch handle must be alternately placed upon such screws as communicate with the 35 parts which are required to be raised or lowered ; but if it is desirable to place the invalid in the position represented at Fig. 9, this may be effected by simply turning the handle when placed upon the shank end of the screw communicating with the radial bar *q*. The arm of the said couch is so centred as to

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move with the rising frame, thus keeping its parallel position in whatever direction the rising frame may be moved.

My said improvements when applied to chairs have one action for elevating or depressing the seat and back and another for raising or lowering the feet, 5 as represented at Fig. 12, Sheet 2. My improvements in chairs extend also to a mode of lifting the said chairs by balance lever handles, in such manner as to retain them in an upright position into whatever position the said handle may be brought, as represented at Fig. 13, Sheet 2.

At Fig. 7, Sheet 1 of the accompanying Drawings, is shown a bedstead of 10 my improved construction, the novelty of which consists in a simple mechanical arrangement placed at the head of the bed, by which, through the intervention of a winch handle, the framework upon which the bed or mattress rests may be raised or lowered as required; to effect which object, motion should be given to the right and left handed screw, thus causing the nuts to be separated 15 or brought together, upon the heads of which pulleys are affixed, so that the cords, by being extended or contracted, may raise or lower the bed, as represented.

Having now fully described the nature of these my said improvements, and the manner in which the same are to be performed, I would have it clearly under- 20 stood that I do not by any means intend to confine myself to the precise details herein-before described, as the same might be varied without departing from the general principle of these my said improvements; but that which I do claim as new and of my said Invention is, the general construction and arrangement of the several parts of the adjusting furniture, in the manner and for the 25 purposes herein-before set forth and described.

In witness whereof, I, the said John Alderman, have hereunto set my hand and seal, this Eleventh day of October, in the year of our Lord One thousand eight hundred and fifty-five.

JOHN ALDERMAN. (L.S.)

30 Witness,

FRED^k R. DARKIN CAMPBELL,

Clerk to Messrs. Weatherdon & Co.,

77, Chancery Lane.

LONDON:

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FIG. 1.

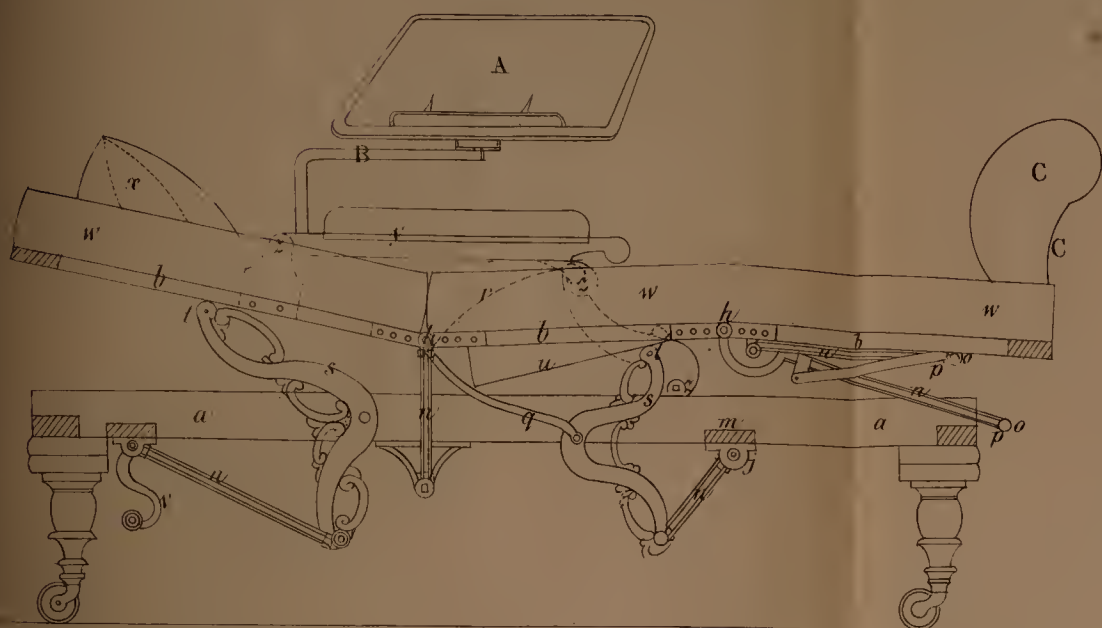


FIG. 2.

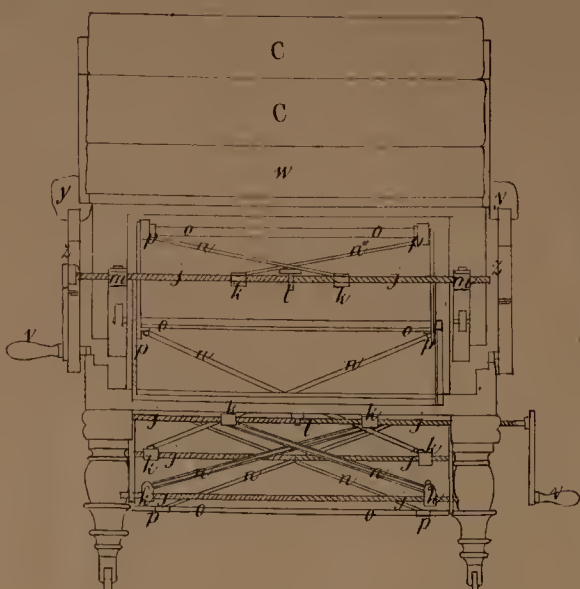


FIG. 3.

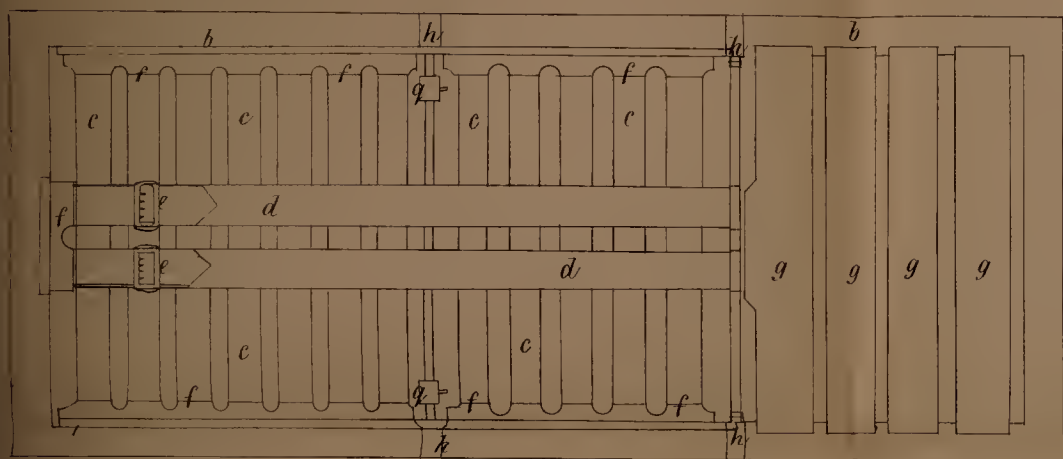


FIG. 7.

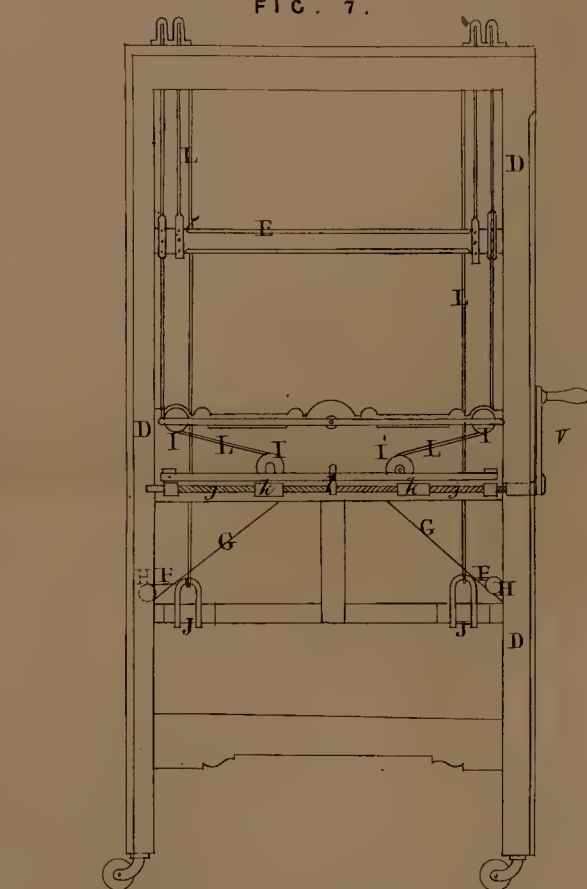


FIG. 4.

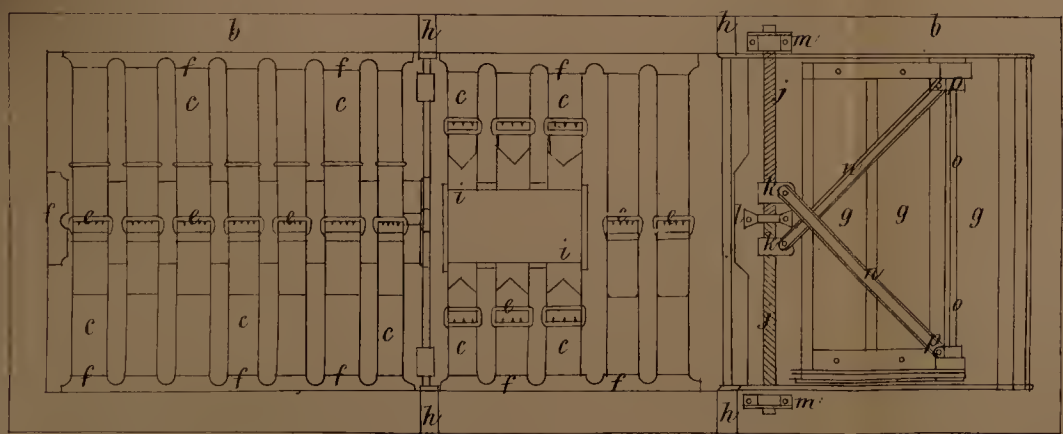


FIG. 6.

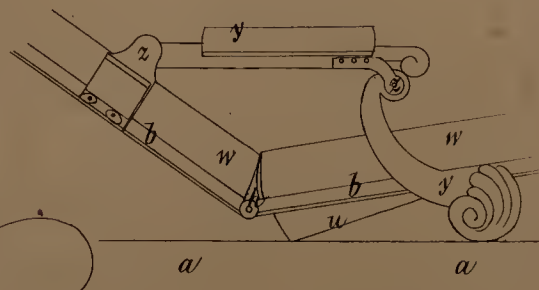


FIG. 5.

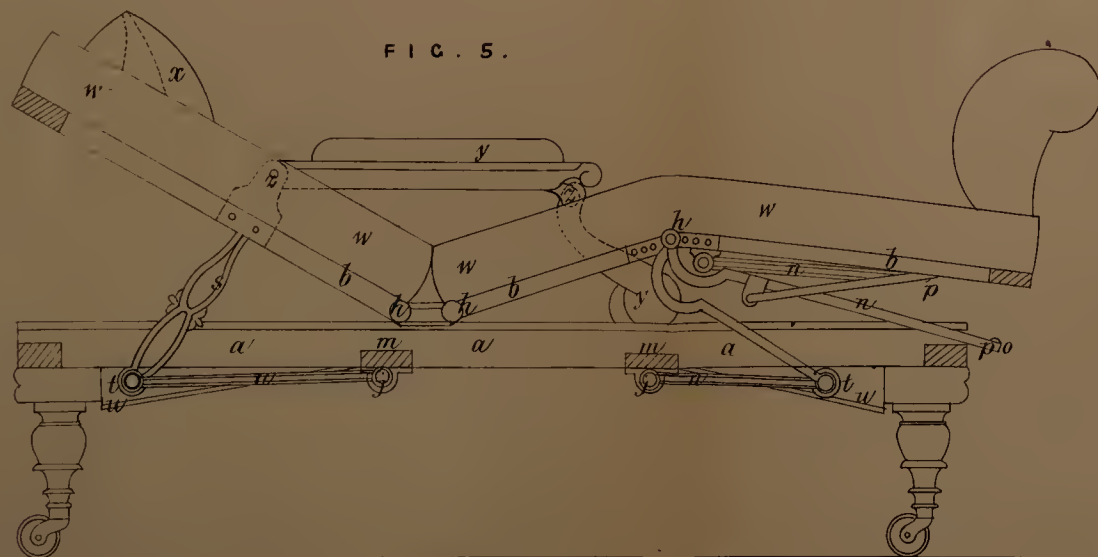


FIG. 8.

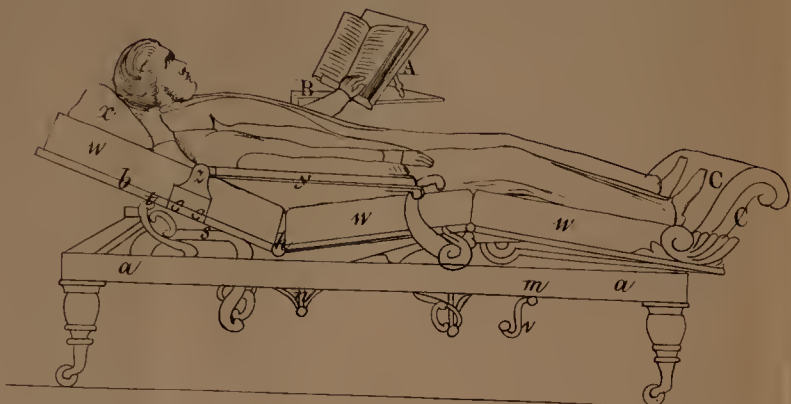


FIG. 9.

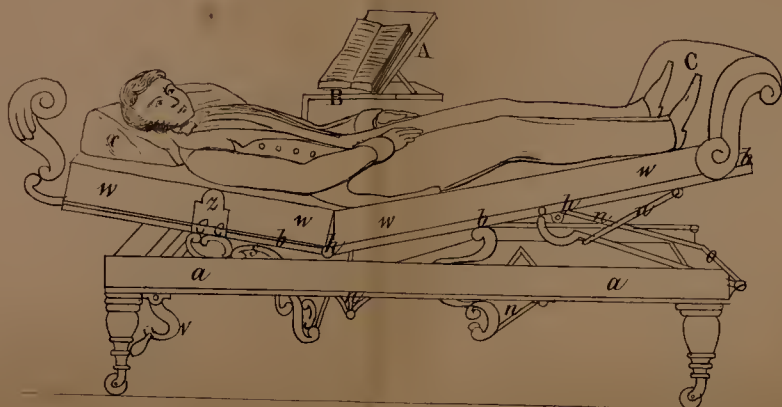


FIG. 13.

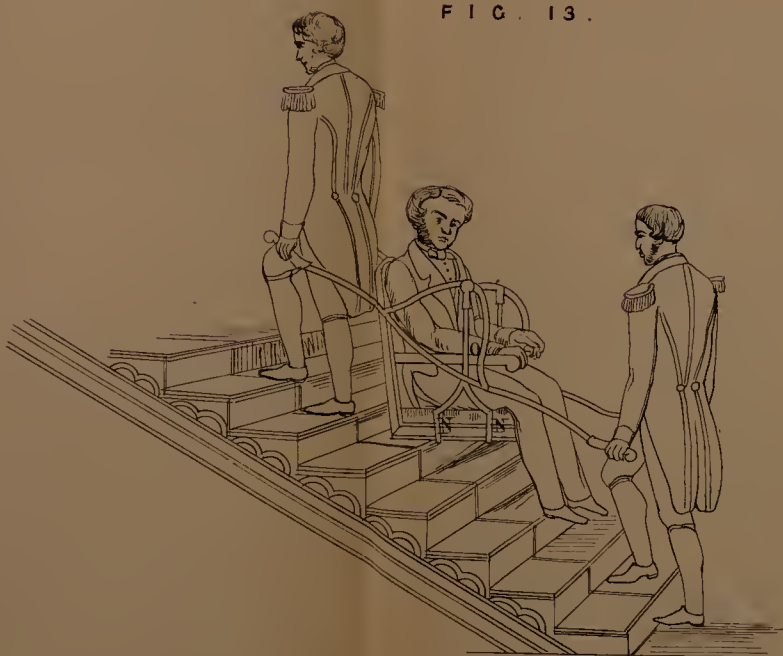


FIG. 12.



FIG. 14.

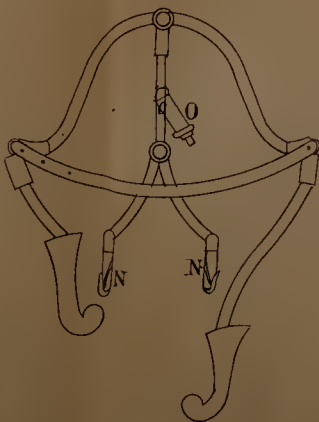


FIG. 11.

